

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions of claims in the application:

Listing of Claims:

1. (Currently Amended) A voice over Internet (VOIP) system, comprising:
at least one infrastructure component communicating with one or more wireless devices using a wireless device over-the-air (OTA) protocol different from Internet protocol (IP), the infrastructure component including:
at least one logic component facilitating communication between a target wireless device and a communication device, the target wireless device not supporting IP, the logic component undertaking method acts including:
receiving communication device-generated voice data in IP protocol, wherein the voice data in IP protocol is received by the infrastructure component based on an IP address allocated from the infrastructure component and assigned to the target wireless device based on the location of the target wireless device;
transforming the voice data in IP protocol to the wireless device OTA protocol without vocoding the voice data;
sending the voice data in the wireless device OTA protocol to the target wireless device;
transforming voice data in the wireless device OTA protocol received from the target wireless device to IP protocol without devocoding the voice data; and
sending the voice data in IP protocol toward the communication device.
2. (Previously Presented) The system of Claim 1, wherein the wireless device OTA protocol is a code division multiple access (CDMA) air interface protocol.
3. (Original) The system of Claim 1, wherein the infrastructure component is a base station (BTS).
4. (Original) The system of Claim 1, wherein the infrastructure component is a base station controller (BSC).

5. (Previously Presented) The system of Claim 1, wherein the wireless device OTA protocol is an over-the-air (OTA) voice protocol.

6. (Original) The system of Claim 1, wherein the logic component converts OTA protocol packets to IP packets.

7. (Original) The system of Claim 1, wherein the logic component converts IP packets to OTA protocol packets.

8. (Original) The system of Claim 6, wherein the logic component converts IP packets to OTA protocol packets.

9. (Previously Presented) The system of Claim 1, wherein the wireless device OTA protocol is a spread spectrum protocol.

10. (Original) The system of Claim 6, wherein an OTA protocol voice packet has a size less than the size of an IP packet.

11. (Currently Amended) A method for communicating voice data in IP to a wireless device not supporting Internet protocol (IP), comprising:

determining a location of the wireless device;

associating a first IP address with the wireless device based at least in part on the location of the wireless device;

receiving, at a first infrastructure component from which the IP address is allocated, communication device-generated voice data in IP protocol;

transforming, at the first infrastructure component, the voice data in IP protocol to an over-the-air (OTA) protocol different from IP protocol without vocoding the voice data; and

transmitting the voice data in the OTA protocol to the wireless device;

transforming, at the first infrastructure component, voice data in the OTA protocol received from the wireless device to IP protocol without devocoding the voice data; and

sending the voice data in IP protocol toward the communication device.

12. (Cancelled)

13. (Cancelled)

14. (Previously Presented) The method of Claim 11, wherein the method is undertaken by a one or more communication system infrastructure components.

15. (Previously Presented) The method of Claim 14, wherein the infrastructure components are base stations (BTSs).

16. (Previously Presented) The method of Claim 14, wherein the infrastructure components are base station controllers (BSCs).

17. (Original) The method of Claim 11, wherein the OTA protocol is a CDMA protocol.

18. (Original) The method of Claim 12, comprising converting OTA protocol packets to IP packets.

19. (Original) The method of Claim 12, comprising converting IP packets to OTA protocol packets.

20. (Original) The method of Claim 11, wherein the OTA protocol is a CDMA voice protocol.

21. (Original) The method of Claim 11, wherein an OTA protocol voice packet has a size less than the size of an IP packet.

22. (Currently Amended) At least one computer program product, comprising:
a computer-readable medium including:
codes for causing a computer to determine a location of a wireless device;

codes for causing [[a]] the computer to associate a first IP address with the wireless device based at least in part on the location of the wireless device;

codes for causing [[a]] the computer to receive, at a first infrastructure component from which the first IP address is allocated, communication device-generated voice data in IP protocol communicated;

codes for causing [[a]] the computer to convert, at the first infrastructure component, the voice data in Internet protocol (IP) to voice data in over-the-air (OTA) protocol packets, without vocoding the voice data, to render first converted packets, wherein the OTA protocol is different from IP and supported by the wireless device;

codes for causing [[a]] the computer to convert voice data in OTA protocol packets from the wireless device not supporting IP to IP packets, without devocoding the voice data, to render second converted packets; and

codes for causing [[a]] the computer to provide communication between the wireless device and the infrastructure component using the first and second converted packets.

23. (Previously Presented) The product of Claim 22, wherein a first converted packet has a size smaller than a second converted packet.

24. (Previously Presented) The product of Claim 23, wherein a first converted packet has a size smaller than a header of a second converted packet.

25. (Previously Presented) The product of Claim 22, wherein the OTA protocol is a CDMA protocol.

26. (Cancelled)

27. (Previously Presented) The product of Claim 22, wherein the computer is a base station or a base station controller.

28. (Cancelled)

29. (Cancelled)

30-68. (Cancelled)

69. (Previously Presented) The system of Claim 1, wherein the infrastructure component is a gateway for a satellite communication system.

70. (Previously Presented) The system of Claim 5, wherein the wireless device OTA protocol is a protocol selected from the group of protocols consisting of: CDMA, WCDMA, TDMA, TD-SCDMA, UMTS.

71. (Previously Presented) The method of Claim 14, wherein the first infrastructure component is a gateway for a satellite communication system.

72. (Previously Presented) The method of Claim 11, wherein the wireless device OTA protocol is a protocol selected from the group of protocols consisting of: CDMA, WCDMA, TDMA, TD-SCDMA, UMTS.

73. (Previously Presented) The system of Claim 1, wherein the voice data represents digitized voice, or digital data.

74. (Currently Amended) A voice over Internet (VOIP) system, comprising:
at least one infrastructure component communicating with one or more wireless devices using a wireless device over-the-air (OTA) protocol different from Internet protocol (IP);

at least one wireless communication device communicating with the infrastructure, the wireless communication device not supporting IP;

wherein the wireless communication device is a target wireless device and has an assigned IP address allocated from the infrastructure component and assigned based on the location of the wireless communication device; and

wherein the infrastructure component includes at least one logic component facilitating communication between the target wireless device and another communication device, the target wireless device not supporting IP, the logic component undertaking method acts including:

receiving, at the infrastructure component, voice data in IP protocol from the communication device based on the IP address;

transforming voice data in IP protocol to the wireless device OTA protocol without vocoding the voice data;

sending the voice data in wireless device OTA protocol to the target wireless device;

transforming voice data in wireless device OTA protocol from the target wireless device to IP protocol without devocoding the voice data; and

sending the voice data in IP protocol toward the other communication device.

75. (Cancelled)

76. (Previously Presented) The system of Claim 74, wherein the wireless device OTA protocol is a code division multiple access (CDMA) air interface protocol.

77. (Previously Presented) The system of Claim 74, wherein the infrastructure component is a base station (BTS).

78. (Previously Presented) The system of Claim 74, wherein the infrastructure component is a base station controller (BSC).

79. (Previously Presented) The system of Claim 74, wherein the infrastructure component is a gateway for a satellite communication system.

80. (Previously Presented) The system of Claim 74, wherein the wireless device OTA protocol is an over-the-air (OTA) voice protocol.

81. (Previously Presented) The system of Claim 74, wherein the logic component converts OTA protocol packets to IP packets.

82. (Previously Presented) The system of Claim 74, wherein the logic component converts IP packets to OTA protocol packets.

83. (Previously Presented) The system of Claim 79, wherein the logic component converts IP packets to OTA protocol packets.

84. (Previously Presented) The system of Claim 78, wherein the wireless device OTA protocol is a spread spectrum protocol.

85. (Previously Presented) The system of Claim 79, wherein an OTA protocol voice packet has a size less than the size of an IP packet.

86. (Cancelled)

87. (Currently Amended) The method of Claim 11, wherein the wireless device is a first wireless device and the first wireless device communicates with a second wireless device in a call, ~~and the method includes not undertaking tandem vocoding in the call.~~

88. (Cancelled)

89. (Currently Amended) A system for communicating voice data in IP to a wireless device not supporting Internet protocol (IP), comprising:

means for determining a location of the wireless device;

means for associating an IP address with the wireless device based at least in part on the location of the wireless device;

means for receiving, at an infrastructure component from which the IP address is allocated, communication device-generated voice data in IP protocol;

means for transforming, at the infrastructure component, the voice data in IP protocol to an over-the-air (OTA) protocol different from IP protocol without vocoding the voice data; and

means for transmitting the voice data in the OTA protocol to the wireless device;

means for transforming, at the first infrastructure component, voice data in the OTA protocol received from the wireless device to IP protocol without devocoding the voice data; and
means for sending the voice data in IP protocol toward the communication device.

90. (Previously Presented) The method of claim 11, wherein determining a location of the wireless device, further comprises continually determining the location of the wireless device during a voice call and associating second IP address with the wireless device based at least in part on movement of the wireless device during the voice call.

91. (Previously Presented) The method of claim 11, further comprising:
determining that the wireless device has moved to a location supported by a second infrastructure component;
associating a second IP address with the wireless device allocated from the second infrastructure component;
receiving, at the second infrastructure, the communication device-generated voice data in IP protocol;
transforming, at the second infrastructure component, the voice data in IP protocol to the OTA protocol; and
transmitting the voice data in the OTA protocol to the wireless device.

92. (Currently Amended) The product of claim 22, further comprising
codes for causing a computer to determine that the wireless device has moved to a location supported by a second infrastructure component;
codes for causing [[a]] the computer to associate a second IP address with the wireless device allocated from the second infrastructure component;
codes for causing [[a]] the computer to receive, at the second infrastructure, the communication device-generated voice data in IP protocol;
codes for causing [[a]] the computer to transform, at the second infrastructure component, the voice data in IP protocol to the OTA protocol; and
codes for causing [[a]] the computer to transmit the voice data in the OTA protocol to the wireless device.

93. (Previously Presented) The system of claim 74, wherein the IP address assigned to the wireless device can change during a voice call based on the wireless device changing location during the voice call.